

JACOB CHRISTIAN SCHÄFFER, 1718-1790
CLERGYMAN, ENTOMOLOGIST, PAPERMAKER,
SCHOLAR

BY HARRY B. WEISS

Biographical references to Jacob C. Schäffer in entomological literature are apparently rare and as a rule they are bibliographical rather than biographical so that little is learned of the man himself. In order to correct this situation, so far as I am able, the following notes have been gathered together and are here presented so as to provide another example of the versatility of our early naturalists. Living, as he did, in Germany during the eighteenth century, when entomology in America was in its infancy, his entomological papers were unknown to American entomologists and even today are rarely referred to except by an occasional lepidopterist. However, James Wilson in his article on entomology in the seventh edition of the *Encyclopædia Britannica*, London, 1835, included Schäffer in his "Notices regarding the principal authors in entomology, and their works."

What apparently is a complete list of Schäffer's writings on entomology may be found in volume three of "*Index Litteraturæ Entomologicæ*" by Walther Horn and Sigm. Schenkling (Berlin-Dahlem, 1928). From this list it is apparent that his insect publications appeared first in 1752 when he was about 34 years of age and continued more or less evenly for a period of 28 years. In all there are 18 titles in his bibliography. He wrote of a caterpillar that was doing much damage in Saxony, of the "saddle fly," of new information on caterpillars and butterflies, of the transformation of the "root house caterpillars," of the flying Uferas that he had observed on the Danube and on the stone bridge at Regensburg, of various butterflies and horned beetles, of the "white shell crown and club beetle" [probably "long horn"], of the masonry bee, of the doubt and adversity that still prevailed in the study of insects, and of the "May worm beetle" as a reliable remedy against the bite of a mad dog, etc.

In addition his more important works included "Abhandlungen von Insecten," Regensburg, in three volumes, two in 1764 and the third in 1779; "Icones Insectorum circa Ratisbonam indigenorum," Regensburg, in three volumes, 1766-1779, text in Latin and German, this being a large collection of colored plates of the insects of his own neighborhood, with the names of Linnæus. James Wilson referred to this in 1835, as being well executed and presenting "a careful development of the most important characters." And finally there was his volume "Elementa Entomologica," Regensburg, 1766, with its 135 colored plates. To this Schäffer added a supplement in 1777, containing new genera. Of this work, Wilson wrote, "Although the names of his classes are different, yet the classes themselves coincide with those of Geoffroy."

This is a very brief and inadequate summary of Schäffer's entomological work. Much more could be written were his writings available. Dr. F. S. Bodenheimer in his "Material zur Geschichte der Entomologie bis Linné" (2 vols., Berlin, 1928, 1929) refers to him several times and reproduces some of the illustrations in his books, showing collecting apparatus, forceps, specimen boxes and cases, nets, umbrella, beating stick, breeding jar and cabinet.

The above was the extent of my information about Schäffer until I happened to see a copy of "The Paper Maker," vol. 21, No. 2, 1952, published by the Paper Makers Chemical Department of the Hercules Powder Company, which carried an informative and highly interesting paper entitled "In Search for New Raw Materials, Being the narration of the many efforts of papermakers, clergymen, and scholars to make paper from materials other than rags, and of the curious books they left us," by Henk Voorn, editor and owner of the only paper trade journal in Holland, "De Papierwereld." Mr. Voorn's article (p. 1-14) among other matters contains more information about Schäffer's life in general than is available in entomological journals. Although neglected by entomologists who are mostly not historically minded, Schäffer receives full credit, for his experiments in the utilization of plants for the manufacture of paper, by historians of papermaking.

Linen rags were scarce during the eighteenth century and this induced a search for new raw materials from which paper could be made. Schäffer was one of those who engaged in research upon this subject. Although not a papermaker himself he intended his experiments to be useful to papermakers and to facilitate and extend the art of papermaking. Mr. Voorn records and evaluates Schäffer's contributions, discusses the beliefs of Schäffer's critics, and the results of an analysis of 114 of Schäffer's samples, made many years after Schäffer's death, in which rags turned up in samples that were not supposed to contain any, thus posing a problem for solution, long after the event. Mr. Voorn's account includes a bibliography of Schäffer's books on papermaking that were published in Regensburg from 1765 to 1772, and illustrations from Schäffer's works depicting his equipment, two title pages of one of his treatises, and several other engravings. There is also included a portrait of Schäffer from a painting by G. V. Mansinger in 1774.

Of most interest to entomologists however is the general account of Schäffer's life which is quoted below, from Mr. Voorn's article, with the kind permission of Bronson B. Tufts, editor of "The Paper Maker."

"Jacob Christian Schäffer was born at Querfurt, May 30, 1718, and died seventy-two years later, January 5, 1790 at Regensburg, the town where he had worked nearly all his life. He is the hero and the center in the search for new raw materials for papermaking. Schäffer was a clever, ingenious man who possessed fabulous knowledge. At eighteen and as a poor boy, he went to the University at Halle. Two years later, financial difficulties forced him to accept a position with a merchant in Regensburg. When the merchant died, Schäffer was ready to return to Halle, but in 1741, he was offered a pastorate in Regensburg. As a clergyman, he was much loved by his parishioners. He continued his studies and in 1763 he succeeded in getting his doctor's degree in theology in Tübingen.

"Schäffer's many books show him to be an honest, devout soul possessing a great thirst for scientific knowledge. So, with his customary energy, he acquired a profound understanding of natural science. He gathered together a private museum of

natural history, which became well-known in Germany and abroad and which became a mecca for famous scholars from all parts of the world. The extent of his knowledge can be seen by examining the books he wrote, both in his own tongue and in Latin, on insects and fish. Many of the books have been translated into Dutch. Widely acclaimed was his work on the fungi of Bavaria, and it remained the standard book on the subject until far into the nineteenth century.

“It would be wrong to think of Schäffer as a man devoted exclusively to theory and having little interest in putting his theories to practical use. With foresight and clarity, he wrote about a new sawing machine. For the ladies, he wrote of a new-model oven, and his booklet on a practical washing machine was reprinted three times and was translated into Dutch. Schäffer was typical of the eighteenth century: minister and scholar, artisan and large-scale author who published books on a variety of subjects every year. This man, famous and honored throughout Europe, was awarded medals, premiums, and honorary titles by kings in Germany and elsewhere. A correspondent and an honorary professor of many universities, he wrote about new materials for making paper in the only way we would expect from such a man—thoroughly and scientifically. His books on papermaking are written in fluent language and are illustrated by numerous plates and examples.”